**We Claim:**

1. A method of determining the accumulation interval between a first defrost cycle and a second defrost cycle in a refrigeration apparatus having an evaporator coil and an electrical defrost heater for applying heat to the evaporator coil during a defrost cycle, comprising the steps of:

during the first defrost cycle, periodically sensing the voltage being delivered to the heater during said first defrost cycle;

for each voltage sensed, calculating and recording the amount of energy expended during that period;

adding said amounts of energy expended to obtain the total energy expended during the first defrost cycle; and

applying said total energy expended to determine the accumulation interval.

2. A method as set forth in claim 1 wherein the step of determining the accumulation interval includes the step of calculating the amount of ice melted during the first defrost cycle.

3. A method as set forth in claim 1 wherein the step of determining the accumulation interval includes the step of calculating an amount of dry-coil de-ice energy expended in the first defrost cycle.

4. A method as set forth in claim 3 wherein the step of determining the accumulation interval includes the additional step of subtracting said dry-coil de-ice energy expended from said total energy expended to obtain the net de-ice energy expended in removing frozen condensate from said evaporator coil.

5. A method as set forth in claim 2 wherein said step of calculating the amount of ice melted is made on the basis of a sensed temperature of air returning to said evaporator coil from a temperature controlled space.

6. A method as set forth in claim 2 wherein said step of calculating the amount of ice melted includes the step of calculating the rate of frozen condensate accumulation during the period between the first and second defrost cycles.

7. A method as set forth in claim 6 wherein said step of calculating the rate of frozen condensate accumulation is accomplished by considering the amount of ice melted during the first defrost cycle and the compressor run time since the first defrost cycle.

8. A method as set forth in claim 6 wherein said accumulation interval is determined on the basis of said rate of frozen condensate accumulation and a predetermined maximum allowable amount of frozen condensate.

9. A method as set forth in claim 1 wherein step of periodically sensing the voltage is accomplished every second.

10. A control system for a refrigeration apparatus having an evaporator coil and an electric defrost heater for applying heat to the evaporator coil during a defrost cycle, comprising:

sensing means for periodically sensing a voltage being delivered to the heater during a defrost cycle;

first calculation means for calculating an amount of energy expended during each of said periods and for adding said amounts to obtain a total amount of energy expended by the defrost heater during the defrost cycle; and

second calculating means for calculating an accumulation interval to a next defrost cycle on the basis of said total amount of energy expended.

11. A control system as set forth in claim 10 wherein said first and second calculating means are contained within a controller.

12. A control system as set forth in claim 11 wherein said system includes a temperature sensor for sensing a temperature of the air returning to said evaporator coil from a temperature controlled space.

13. A control system as set forth in claim 12 wherein said controller receives inputs from said temperature sensor.

14. A control system as set forth in claim 10 wherein said second calculating means includes means for determining an amount of ice that is melted during the defrost cycle.

15. A control system as set forth in claim 14 wherein said second calculation means includes means for determining a rate of frozen condensate accumulation following the defrost cycle.

16. A control system as set forth in claim 15 where said rate determining step is accomplished as a function of an amount of ice melted during the defrost cycle and a compressor run time following the defrost cycle.